



SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: Dario Neri
Lorenzo Tarli
Francesca Viti
Manfred Birchler

(ii) TITLE OF INVENTION:

SPECIFIC BINDING MOLECULES FOR SCINTIGRAPHY, CONJUGATES
CONTAINING THEM AND THERAPEUTIC METHOD OF TREATMENT
OF ANGIOGENESIS

(iii) NUMBER OF SEQUENCES: 21

(iv) CORRESPONDENCE ADDRESS:

(A) ADDRESSEE: PEPPER HAMILTON LLP
(B) STREET: 600 Fourteenth Street, N.W.
(C) CITY: Washington
(D) STATE: D.C.
(E) COUNTRY: U.S.A.
(F) ZIP: 20005-2004

(v) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy Disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC Windows
(D) SOFTWARE: WP 8.0

(vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER:
(B) FILING DATE: April 28, 1999
(C) PRIOR APPLICATION: US 09/075,338
(D) PRIOR APPLICATION FILING DATE: May 11, 1998
(E) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION

(A) NAME: Pepper Hamilton LLP
(B) REGISTRATION NUMBER: 021269
(C) REFERENCE/DOCKET NUMBER: 113000.301

(ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (202) 220-1200
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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24
(B) TYPE: DNA
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:
(B) LOCATION:
(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: LMB1bis

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

gcggcccagc cgccatggc cgag

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 54
(B) TYPE: DNA
(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: DP47CDR1for
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:
 gagcctggcg gaccagctc atmnnmnmn ngctaaaggt gaatccagag gctg 54
 (2) INFORMATION FOR SEQ ID NO:3:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 23
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: DP47CDR1back
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:
 atgagctggg tccgccaggc tcc 23
 (2) INFORMATION FOR SEQ ID NO:4:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 60
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: DP47CDR2for
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:
 gtctgcgtag tatgtgtac cmnnactacc mnaatmnmnt gagaccact ccagcccctt 60
 (2) INFORMATION FOR SEQ ID NO:5:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 24
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: DP47CDR2back
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:
 acatactacg cagactccgt gaag 24
 (2) INFORMATION FOR SEQ ID NO:6:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 53
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: JforNot

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:
tcattctcga cttgcggcgc ctttgatttc caccttggtc ccttggccga acg 53

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 47
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR1for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:
gtttctgctg gtaccaggct aamngctgc tgtaacact ctgactg 47

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 23
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR1back

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:
ttagcctggt accagcagaa acc 23

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 46
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR2for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:
gccagtggcc ctgctggatg cmnnatagat gaggagcctg ggagcc 46

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21
- (B) TYPE: DNA
- (C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

- (A) NAME/KEY:
- (B) LOCATION:
- (C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPKCDR2back

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:
gcatccagca gggccactgg c 21

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 45

(B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: DP47baNco
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:
 gcggcccagc atgcatggc cgaggtgcag ctgttggagt ctggg 45
 (2) INFORMATION FOR SEQ ID NO:12:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 55
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: CDR3for
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:
 gggtccctgg cccagtagt caaamnnmnn mnnmnnntttc gcacagtaat atacg 55
 (2) INFORMATION FOR SEQ ID NO:13:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 24
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: VHpullth
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:
 gcggcccagc atgcatggc cgag 24
 (2) INFORMATION FOR SEQ ID NO:14:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 66
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:
 (B) LOCATION:
 (C) OTHER INFORMATION:
 Description of Artificial Sequence: PCR primer: Jassm
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:
 cccgctaccg ccactggacc catcgccact cgagacggtg accaggggttc cctggcccca 60
 gtagtc 66
 (2) INFORMATION FOR SEQ ID NO:15:
 (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 62
 (B) TYPE: DNA
 (C) ORGANISM: ARTIFICIAL SEQUENCE
 (ii) FEATURE:
 (A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPK22assm

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

gatgggtcca gtggcggtag cgggggcgcg tcgactggcg aaattgtgtt gacgcagtct 60
cc 62

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 63

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: DPK3for

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

caccttggtc ccttggtccga acgtmnnccg mnnmnnaccm nctgctgac agtaatacac 60
tgc 63

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 56

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: Jfornot

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

gagtcattct cgacttgccg cgcgtttgat ttccaccttg gtcccttggc cgaacg 56

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24

(B) TYPE: DNA

(C) ORGANISM: ARTIFICIAL SEQUENCE

(ii) FEATURE:

(A) NAME/KEY:

(B) LOCATION:

(C) OTHER INFORMATION:

Description of Artificial Sequence: PCR primer: VLpullth

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

gatgggtcca gtggcggtag cggg 24

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 116

(B) TYPE: PRT

(C) ORGANISM:

VH antibody specific for ED-B domain of fibronectin

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Glu Val Gln Leu Leu Glu Ser Gly Gly Gly Leu Val Gln Pro Gly Gly
1 5 10 15
Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Ser Phe

	20		25		30
Ser Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu Glu Trp Val					
	35		40		45
Ser Ser Ile Ser Gly Ser Ser Gly Thr Thr Tyr Tyr Ala Asp Ser Val					
	50		55		60
Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Asn Thr Leu Tyr					
65		70		75	80
Leu Gln Met Asn Ser Leu Arg Ala Glu Asp Thr Ala Val Tyr Tyr Cys					
	85		90		95
Ala Lys Pro Phe Pro Tyr Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val					
	100		105		110
Thr Val Ser Ser					
	115				

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14

(B) TYPE: PRT

(C) ORGANISM: ANTIBODY LINKER

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

Gly Asp Gly Ser Ser Gly Gly Ser Gly Gly Ala Ser Thr Gly					
1	5		10		

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 108

(B) TYPE: PRT

(C) ORGANISM:

VL Antibody Specific for ED-B domain of Fibronectin

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Glu Ile Val Leu Thr Gln Ser Pro Gly Thr Leu Ser Leu Ser Pro Gly					
1	5		10		15
Glu Arg Ala Thr Leu Ser Cys Arg Ala Ser Gln Ser Val Ser Ser Ser					
	20		25		30
Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Gln Ala Pro Arg Leu Leu					
	35		40		45
Ile Tyr Tyr Ala Ser Ser Arg Ala Thr Gly Ile Pro Asp Arg Phe Ser					
	50		55		60
Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile Ser Arg Leu Glu					
65		70		75	80
Pro Glu Asp Phe Ala Val Tyr Tyr Cys Gln Gln Thr Gly Arg Ile Pro					
	85		90		95
Pro Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys					
	100		105		